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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/893,399

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6008

7590

03/27/2007

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EXAMINER

MAYES, MELVIN C

ART UNIT

PAPER NUMBER

1734

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/893,399

Applicant(s)

ARISHIRO ET AL.

Examiner

Melvin Curtis Mayes

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

(1)

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

(2)

Claims 1, 3 and 5-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 5 and 6 claim a chucking device which temporarily places the chucking points closer to each other at a moment of lifting but does not provide adequate description of the structure or construction of the chucking device that can place chucking points closer to each other such that one skilled in the art can make or use the invention.

Chucking device 14 is schematically shown in Figure 2, however there is no other diagrammatic showing or description of the chucking device to enable one of ordinary skill in the art to make and/or use a chucking device which can place chucking points closer to each other at the moment of lifting of a green sheet.

(3)

Claims 10-12 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the chuck of the tray drawer device being vertically and horizontally

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movable, does not reasonably provide enablement for the tray drawer device being vertically and horizontally movable. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

According to the specification, the tray drawer device comprises a chuck that travels along a rail, and the chuck is raised in a vertical direction and travel horizontally along the rail. There is no support for the tray drawer device itself, the chuck and rail, being vertically and horizontally movable.

(4)

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

(5)

Claims 1, 3 and 5-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, 5 and 6 recite the limitation "the chucking points." There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

(6)

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

(7)

Claims 1, 3 and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM Technical Disclosure Bulletin (Cochran et al.) in view of IBM Technical Disclosure Bulletin (Anzelone et al.) and JP 6-255814.

IBM Technical Disclosure Bulletin (Cochran et al.) discloses a stacking complex for stacking green sheets comprising:

handlers 1 holding a plurality of trays 2 for delivering green sheets to an orientor, each tray holding greensheets separated by spacers (corresponds to sheet supplier including a plurality of trays each holding green sheets);

stacking carrier onto which green sheets are stacked (corresponds to a laminator);

vacuum transfer head 4 for transferring green sheets from a tray and conveying the green sheet to the stacking carrier (corresponds to a conveyor device in the form of a chucking device);
and

a controller (corresponds to a processor unit) (see Fig. 3). As shown in Figure 2, a plurality of trays are vertically aligned in each handler.

IBM TDB (Cochran et al.) does not specifically disclose that the handler includes a rack into which the trays are vertically aligned or vertically movable, tray drawer device for drawing trays from the rack, and rails to guide a tray drawing operation. IBM Technical Disclosure

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Bulletin does not disclose that the vacuum transfer head (chucking device) vacuum chucks each green sheet near opposing edges and can temporarily place chucking points closer to each other.

IBM Technical Disclosure Bulletin (Anzelone et al.) teach that the handler for transfer of greensheets from trays to an orientor is provided as a magazine containing trays in which green sheets are located. Upon computer demand, the magazine is raised or lowered (see direction arrows in Figure 1) to a proper cavity location in which gripper assembly 4 grips and moves a given tray from the magazine to orientor for removal by a transfer head. Various process equipment is under computer order makeup control.

JP 6-255814 teaches that to surely suction, hold and convey a single ceramic green sheet from a stack of green sheets, suckers 20 of the vacuum head are movable by air cylinders 22 such that the spacing of the suckers can be changed so that a green sheet stuck to the suckers can be sagged to separate from the adjacent green sheet in the stack (Abstract and computer translation).

It would have been obvious to one of ordinary skill in the art to have modified the stacking complex of IBM TDB (Cochran et al.) by providing the handler with a magazine which contains the trays and which is vertically raised and lowered and a vertically and horizontally movable gripper assembly for gripping and moving a tray from the magazine, as taught by IBM TDB (Anzelone et al.), as a handler used to under computer control to deliver green sheets from trays to an orientor for further processing such a pickup by a transfer head.

By providing the vertically and horizontally movable gripper assembly to grip and remove trays from the magazine, a tray drawer device for drawing trays and rails for guiding the tray drawer device are obviously provided. By providing the vertically aligned trays in a

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magazine from which they can be removed, a rack for vertically aligning the trays is obviously provided. By providing the magazine as movable vertically, the handler is obviously provided with a drive for driving the rack to be raised and lowered in a vertical direction.

By providing the controller and computer as taught by IBM TDB (Anzelone et al.) to control various process equipment including control of transfer of green sheets from trays, a processor unit adapted to receive data concerning at least type, order in lamination and quantity of green sheets for lamination is obviously provided.

It would have been obvious to one of ordinary skill in the art to have further modified the stacking complex of IBM TDB (Cochran et al.) by providing the vacuum transfer head with suckers which suction each green sheet near edges of the green sheet and which are movable so that the spacing between the suckers can be changed, as taught by JP 6-255814, so that a green sheet stuck to the suckers of the vacuum head can be sagged to separate from an adjacent green sheet in the stack, thus allowing sure suction, hold and conveying of a single ceramic green sheet from a stack of green sheets. By providing the vacuum transfer head with suckers that are movable to change their spacing and thus cause a green sheet to sag, the vacuum transfer head vacuum chucks a green sheet near opposing edges of the green sheet and can place chucking points closer to each other at lifting to cause the green sheet to sag and separate, as claimed.

Response to Arguments

(8)

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection, applied because of the amendment to the claims.

Conclusion

(9)

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


(10)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin Curtis Mayes whose telephone number is 571-272-1234. The examiner can normally be reached on Mon-Fri 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on 571-272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Melvin Curtis Mayes
Primary Examiner
Art Unit 1734

MCM
March 20, 2007